

REMARKS/ARGUMENTS

These remarks are made in response to the Office Action of October 22, 2007 (Office Action). As this response is timely filed within the 3-month shortened statutory period, no fee is believed due. However, the Examiner is expressly authorized to charge any deficiencies to Deposit Account No. 50-0951.

In the Office Action, Claims 9-11, 13-19, and 21-24 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 7,117,152 to Mukherji (hereinafter Mukherji). Claims 26 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mukherji in view of U.S. Patent 6,151,576 to Warnock, *et al.* (hereinafter Warnock). Claims 1-3, 5-8, and 25 were rejected under 35 U.S.C. § 112, first paragraph.

Rejections Under §112

As previously noted, Claims 1-3, 5-8, and 25 were rejected under § 112. In particular, the claims were rejected due to Claim 1 reciting the limitation "within the identified portions." In response to this rejection, Applicants have amended Claim 1 to recite "in place of" instead of "within," as suggested in the Office Action. Applicants therefore respectfully request withdrawal of this rejection.

Amendments to the Claims

Although Applicants respectfully disagree with the rejections in the Office Action, Applicants nonetheless have amended the claims in order to expedite prosecution of the present application by further emphasizing certain aspects of the claims. Applicants respectfully assert, however, that the claim amendments presented are not intended as, and should not be interpreted as, the surrender of any subject matter. Applicants are not conceding by these amendments that any previously submitted claims are unpatentable over the references of record. Applicants' present claim amendments are submitted only

for purposes of facilitating expeditious prosecution of the present Application. Accordingly, Applicants respectfully reserve the right to pursue any previously submitted claims in one or more continuation and/or divisional patent applications.

In this response, Applicants have amended the independent claims to emphasize certain aspects of the claims. In particular, the independent Claims 1, 9, and 17 have been amended to recite the limitations of now-cancelled Claims 25, 26, and 27. Furthermore, Applicants have amended the independent claims to recite the further limitation that each portion of the translated text is embedded in an inaudible portion of the voice stream, irrespective of whether a time stamp for the text portion and a portion of the speech signal associated with the identified portion are synchronized. Such an amendment is fully supported throughout the Specification. (See, e.g., para. [0019],[0020].) No new subject matter has been introduced by these amendments.

Aspects of the Claims

Prior to discussing the cited references, it may be useful to discuss certain aspects of the claims. The claims, as amended, recite systems and methods for providing a translation within a voice stream. A exemplary method, as recited in Claim 1, can include receiving a speech signal in a first language. The method can also include the steps of determining text from the speech signal and translating the text to a second and different language. Additionally, the method can include adding time stamp information to each of a discrete number of portions of the received speech signal and to each of a discrete number of portions of the translated text. Furthermore, the method can include the step of identifying within each portion of the speech signal one or more inaudible portions. Finally, the method can include embedding the translated text in the voice stream, where each portion of the translated text is embedded in place of the identified inaudible portions, irrespective of whether the added time stamp for the text to be

embedded and the portion of the of the speech signal associated with the identified inaudible portion are synchronized.

The Claims Define Over the Cited References

In the Office Action, independent Claims 9 and 17 were rejected as being unpatentable over Mukherji in view of admitted prior art. Independent Claim 1 was not rejected based on any cited reference. However, because the scope and content of Claims 1, 9, 17, and their associated dependent claims are similar, Applicants will assume that the same rejections apply to Claim 1. Mukherji discloses a system and method for speech recognition assisted voice communications. However, in view of all the teachings of Mukherji and the other cited references, Applicants respectfully submit that the claims, as amended, each define over the references of record.

First, Mukherji fails to disclose or suggest a single voice stream for asynchronous delivery of voice and data. According to the Office Action, a single voice stream is disclosed in Mukherji:

As noted in the previous Office Action, Mukherji explicitly discloses that it is possible to combine voice and text streams "such that text information "piggybacks" in the voice packet" ("system 10 contemplates combining the two streams such that text information "piggybacks" in the voice packet", emphasis added, col. 5, lines 24-28)

Applicants respectfully disagree and respectfully submit that a closer examination of the cited portion of Mukherji, in view of *all* the teachings of Mukherji, clearly supports Applicants' position in their previous response. In particular, Applicants draw attention to the entirety of the paragraph containing the cited portion, which states (Col. 5, lines 10-28, emphasis added):

During the voice and text session, communications equipment 12 receives voice information using microphone 38. The voice information is then encoded into packets using CODEC 34, and these packets are transmitted to the remote device on voice link 20 using network interface 36.

Substantially simultaneously, the voice information is converted into text and encoded into packets using voice/text module 32, and these packets are communicated to the remote location on text link 22 using network interface 36. Thus, communications equipment 12 generates ***dual communications streams***. One stream communicates packets encoding the text of the voice conversation, and the other stream communicates packets encoding the voice information. Using two different streams, the voice and text packets maybe assigned different levels of service. However, system 10 contemplates combining the two streams such that text information "piggybacks" in the voice packets. Thus the text information may be communicated in the same packet as voice information.

Based at least on this portion of Mukherji, read in its entirety, Applicants respectfully submit that even where Mukherji discloses a single stream of packets being delivered to a recipient, the single stream of packets still includes at least two channels of information. Therefore, even this single stream of packets is actually delivering two continuous streams of information. Such a contention is supported by a full reading of the paragraph above.

Mukherji discloses in the first example in the paragraph above that the voice and data information are generated and delivered as two parallel and separate streams of packets for the recipient. Nowhere does Mukherji disclose or suggest that the voice data and text data are delivered in any other fashion. Therefore, even when one stream in Mukherji is piggybacked onto the second stream to create a single stream, the contemplated result can only be to produce this same type of data flow using a single stream. That is, delivering two parallel streams of data. Therefore, taking Mukherji as a whole, one of ordinary skill in the art would readily recognize that the only method for Mukherji to deliver sets of data in parallel is to have packets configured to deliver the voice and data portions at the same time. Accordingly, one of ordinary skill in the art would readily recognize that this necessarily requires that the single stream of packets include at least two channels in the packets, one for the voice data and one for the text data. Therefore, even though a single stream of packets can be delivered by Mukherji,

the packets must still be configured to deliver two streams of data, one for voice data and one for text data.

In contrast, the claims, as amended, recite a single stream of data to deliver voice data with unused (inaudible portions) portion of the voice stream being configured to deliver text data. That is, the claims recite a stream of voice data and text data that does not require continuous delivery of voice data and text data. Therefore, rather than delivering the text data as a separate stream, or in a separate channel, the text data is effectively placed within gaps in the voice data. Such a configuration is advantageous in that the voice data need not be compressed to fit with a specific channel. Rather, the inaudible portions of the speech signal are dropped, and text data is saved in those unused portions. Accordingly, voice data and text data can be delivered using a wider bandwidth for the speech, providing a higher quality voice signal in the voice stream.

Additionally, even if Mukherji is assumed to disclose or suggest embedding text data in an inaudible portion of a speech signal portion, Mukherji still fails to disclose embedding such data irrespective of whether the time stamp for text is synchronized with the time stamp for the speech signal portion. Although the Office Action does not directly address this point, the Office Action does recognize that Mukherji fails to disclose the step of providing a time stamp for the translated text or for the speech signal. Accordingly, because Mukherji fails to disclose providing such timing information, Mukherji cannot disclose such a step.

However, the Office Action asserts that Warnock discloses the use of time stamp information and that such information could be used by Mukherji to synchronize the voice data and text data streams. Applicants respectfully disagree. Warnock only discloses the generation of a synchronized voice stream. For example, as shown in FIG. 1, text in a speech stream (102) is recognized by the speech recognition system (110). However, the output of the speech system (110) is not a combined voice and text stream, but just a stream of text and associated time stamps. Therefore, the text stream is

separate from the speech stream 102. The text and speech streams are synchronized in the synchronizer (120) to generate two parallel and synchronized streams to be combined by combiner (130). Therefore, the result in Warnock is always a synchronized stream of voice data and text data. Consequently, even if the time stamp information of Warnock is combined with the method of Mukherji, Mukherji would only use the time stamp information to synchronize the speech and text data for the packets, creating only a synchronized speech packet. Thus, the combination of Warnock and Mukherji always requires the additional step of synchronizing the data prior to generating the stream.

In contrast, the claims, as amended, recite no such limitation. Instead, the amended claims recite that the text, along with the time stamp information, can be embedded in any inaudible portion of speech signal portion. Such a configuration is advantageous because no additional step of synchronizing the speech and text is necessary when generating the voice stream. Rather, because time stamp information is included for each portion of the text data and the voice data in the data stream, synchronization can be postponed until after delivery the voice stream. Furthermore, greater flexibility in storage is allowed since the text data can simply be placed wherever the text data can fit, rather than artificially having to compress the voice data to permit an associated text portion to fit a corresponding text portion, thereby reducing the voice quality of the voice stream.

CONCLUSION

Applicants believe that this application is now in full condition for allowance, which action is respectfully requested. Applicants request that the Examiner call the undersigned if clarification is needed on any matter within this Amendment, or if the

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Examiner believes a telephone interview would expedite the prosecution of the subject application to completion.

Respectfully submitted,

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